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09/361,700	07/27/1999	PIERRICK DESCURE	S1022/8201	5850

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EXAMINER

MUNSON, GENE M

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 07/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

361,700

Applicant(s)

P. DESGURE

Examiner

G. MUNSON

Group Art Unit

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—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 5 JUNE 2003
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-18, 27-34 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-18, 27-34 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____
- ☐ Copies of the certified copies of the priority documents have been received
- in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

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Examination is continued under 37 CFR 1.114.

Claims 31-34 are rejected under 35 U.S.C. 112, first and second paragraphs. The "increases the capacitance of the photodiode" is misdescriptive. See Figures 1A, 1B; specification, pages 2-3. An increased capacitance is parallel to the capacitance of a photodiode PN junction (Figure 1B), which is formed of a N type region in a P type substrate (Figure 1A). Also, in claim 31, that the "conductive layer . . . determines the color of light" does not agree with the specification, page 2, line 30 et seq., page 3, lines 29-31.

The claims are considered insofar as a possible scope is understandable.

The "interferentially filtered" (claim 1) and "wherein . . ." clauses (claims 12, 17, 27) are taken as a possible desired result, or inherent, of the structure otherwise claimed, rather than an additional structural limitation. Claim 1 allows all "sub-arrays" to have the same "determined thickness" which determines the same "respective color of light". Compare with claim 30.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8, 12-15, 17 and 28-33 are rejected under 35 U.S.C. 103 as unpatentable over Koike et al. See Figure 2, column 4, lines 4-7, 46-52. Since Koike et al (column 4, lines 4-7, 46-52) teach to have conductive films fixed to a predetermined voltage which may be ground potential, it would have been obvious to have the substrate 1 at ground potential and the conductive film electrodes 13 (Figure 2) either connected to the substrate 1 or via a fixed potential (claim 2). The "interference filter" insofar as claimed reads on "silicon oxide" layer 12R, 12G, 12B and "polysilicon" layer 13. The claims remain broad in scope. The different thickness of insulating layers (claims 28-30) in Figure 2C of this application are shown by the different thickness of insulating layers in Figure 2 of Koike et al. The "first", "second" and "third" subportions of the "one insulating layer" (claims 28, 29) read on inherent subportions of insulating layers in Figure 2 of Koike et al.

Claims 1, 4, 6, 12, 13, 17 and 31-33 are rejected under 35 U.S.C. 102 as unpatentable as shown by Nagasaki et al. See Figures 1, 3. A "photodiode" made of a "region" (claim 1) and "region" (claims 12, 17) read on region 2; the "interference filter" insofar as claimed reads on "insulating" layer 4 and "conductive" layer 9 or 21. The claims remain broad in scope.

Claims 27 and 34 are rejected under 35 U.S.C. 103 as unpatentable over Koike et al, as in the above rejection, considered together with Merrill '744. It would have been obvious to have

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photodiodes as in Koike et al (Figure 2), in a well region as suggested by Merrill (Figure 7) with a “base substrate” similar to region 50 of Merrill, in order to provide isolation for the photodiodes.

Claims 11 and 18 are rejected under 35 U.S.C. 103 as unpatentable over Koike et al, as in the above rejection of claim 17, further considered together with Nagano. For a connection of an electrode as in Koike et al (Figure 2) to a substrate, it would have been obvious to use a “heavily” doped region, as in Nagano (Figure 3, region 5a), in order to provide a low resistance ohmic contact region for the connection.

Claims 11 and 18 are rejected under 35 U.S.C. 103 as unpatentable over Nagasaki et al, as in the above rejection of claim 17, considered together with Nagano, applied as in the above rejection.

Claims 12, 17, 18, 27 and 32-34 are rejected under 35 U.S.C. 102 as unpatentable as shown by Motojima et al. See Figure 5. The “interference filter” insofar as claimed reads on “insulating” layer 6₂ and “conductive” layer 4. The “conductive portion” includes wiring 5a. The “capacitance” (claims 32-34) is inherent of the structure claimed in claims 12, 17 and 27.

Claims 7, 9, 10 and 16 are rejected under 35 U.S.C. 103 as unpatentable over Koike et al, as in the above rejection of claims 1, 8 and 15, further considered together with Motojima et al. It would have been obvious to use a silicon nitride layer, as in Motojima et al (Figure 5, layer 8; column 3), over electrodes 13 of Koike et al (Figure 2) in order to provide passivation.

Claim 7 is rejected under 35 U.S.C. 103 as unpatentable over Nagasaki et al, as in the above rejection of claim 1, further considered together with Motojima et al. It would have been obvious

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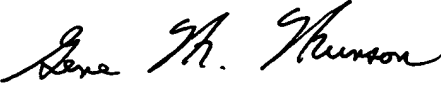
to use a silicon nitride layer, as in Motojima et al (Figure 5, layer 8; column 3), over "conductive" layer 9 or 21 of Nagasaki et al (Figures 1, 3) in order to provide passivation.

The references are all of record.

The arguments in the remarks which accompany the amendment, filed 5 June 2003, have been considered but are not persuasive. Contrary to the remarks (pages 10-16), the *claimed* structure of the "interference filter" still does not distinguish over the same structure in Koike et al, Nagasaki et al and Motojima et al, which all disclose the claimed "conductive" layer over an "insulating" layer. Applicant's "difficulty lies in the breadth of the claims." *In re Sovish*, 226 USPQ 771, 774 (CAFC 1985). Contrary to the remarks (pages 10, 16), claims 1, 12, 17 and 27 still do not preclude an optical filter as in Koike et al. Contrary to the remarks (pages 9-10, 12, 14), Koike et al (column 4) still do suggest that the electrodes are at a fixed potential, including ground potential, so that it would have been obvious to connect the conductive film electrodes 13 (Figure 2) to the substrate 1, which is at a ground potential. Contrary to the remarks (pages 13, 15, 16), Motojima et al still need not mention the words "interference filter", because this application is for a patent not a copyright for a claim that includes the words "interference filter". For the *claimed* "interference filter", Motojima et al do indeed show a "structure corresponding to *what is claimed*." *In re Sovish*, 226 USPQ at 774. Contrary to the remarks (page 17), the different thickness of insulating layers (claims 28-30) in Figure 2C of this application are shown by the different thickness of insulating layers in Figure 2 of Koike et al.

No claim is allowed.

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6/24/03


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